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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/692,171 | 10/23/2003 | Edgar A. O'Rear III | 5820.643 | 8356 |
| 30589 | 7590 | 04/26/2006 | | EXAMINER |
| DUNLAP, CODDING & ROGERS P.C. PO BOX 16370 OKLAHOMA CITY, OK 73113 | | | AHMED, SHEEBA | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1773 | |

DATE MAILED: 04/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|--------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/692,171 | O'REAR ET AL. |
| | Examiner Sheeba Ahmed | Art Unit 1773 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 2/23/06.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-8 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-8 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date: _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 23, 2006 has been entered.

Response to Amendment

2. No amendments have been made to the claims in the above-identified application. **Claims 1-8 are pending.**

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Harwell et al. (US 4,770,906).

Harwell et al. disclose a substrate surface contacted with a surfactant solution comprising a liquid in which at least a first surfactant is dissolved so that an interface is formed between the substrate surface and the surfactant solution under conditions which promote the assembly at such interface of surfactant molecules, such assembled molecules defining a surfactant template for the film to be produced (Column 1, lines 10-16). The method involves the use of several elements, a substrate on which the film is formed, at least one surfactant in solution, one or more monomers, and other chemicals used to initiate polymerization of the monomers (Column 1, lines 58-63). Examples illustrate that alumina and sodium dodecyl sulfate may be used as the substrate-surfactant system. Styrene is used as the monomer and because polymerization of styrene does not occur spontaneously, initiations was required with either persulfate or AIBN. The substrate samples were then placed in an oven at 60°C for 1 hour to vaporize any excess water and unpolymerized styrene. The produced polymeric film is hydrophobic (Claim 12). All limitations of claims 1-8 are disclosed in the above reference.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-5, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Diehl et al. (US 5,623,015).

Diehl et al. disclose a latex binder composition comprised of vinyl-substituted aromatic monomers such as styrene (Column 2, lines 26-43) a free radical initiator such as sodium persulfate (Column 4, lines 7-10) and an anionic surfactant such as sodium dodecyl sulfate (Column 5, lines 33-40). The polymerization is generally carried out at a temperature of 55 to 95°C (Column 5, lines 61-62). The latex binder composition may be applied to non-woven cellulose substrate such as paper and other substrates containing polyester, nylon or acrylates (Column 6, lines 29-35). Accordingly, it would have been obvious to one having ordinary skill in the art to pick any of the vinyl-substituted aromatic monomers, free radical initiators and surfactants listed given that all are taught by Diehl et al. as equivalents of each other.

5. Claims 1-5, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raynolds et al. (US 5,919,716).

Raynolds et al. disclose self-crosslinking polymer compositions useful as coatings for non-woven fabrics (Column 1, lines 10-15) and comprising a vinyl polymer component such a styrenic monomer (Column 3, lines 1-10 and Column 4, lines 27-29), a crosslinker such as sodium persulfate (Column 3, lines 24-26 and Example 1) and a surfactant such as sodium dodecyl sulfate (Column 5, lines 20-30). The reaction is carried out at a temperature of 20 to 90°C (Column 5, lines 50-55). Example 1 indicates that the reaction can be carried out a temperature of 60°C for one hour. Substrates that

may be coated with the self-crosslinkable polymeric composition include polyesters, PP, PE and cellulose substrates (Column 10, lines 23-28). Accordingly, it would have been obvious to one having ordinary skill in the art to pick any of the vinyl-substituted aromatic monomers, free radical initiators and surfactants listed given that all are taught by Raynolds et al. as equivalents of each other.

6. Claim 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raynolds et al. (US 5,919,716) in view of Pickelman et al. (US 4,582,663).

Raynolds et al., as discussed above, do not disclose that the initiator may be AIBN, i.e., azobisisobutyronitrile.

However, Pickelman et al. teach that persulfates and azo compounds such as AIBN and sodium persulfate are known equivalents as conventional polymerization initiators (Column 5, lines 3-10) and therefore, because these two initiators were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute AIBN for sodium persulfate.

Response to Arguments

7. Applicant's arguments filed on February 23, 2006 have been fully considered but they are not persuasive. Applicants traverse the rejection of claims 1-5, 7, and 8 under 35 U.S.C. 103(a) as being unpatentable over Diehl et al. (US 5,623,015) and the rejection of claims 1-5, 7, and 8 under 35 U.S.C. 103(a) as being unpatentable over Raynolds et al. (US 5,919,716) and submit that there is no teaching or suggestion in

Diehl et al. or Raynolds et al. of a method for forming an admicellar hydrophobic polymer coating on at least one of a first and second surface of a sheet of material.

Applicants further state that neither Diehl et al. nor Raynolds teach, disclose, or even suggest Applicants method of utilizing admicellar polymerization for coating a surface of the sheet of material and rather teaches the method of forming a polymer in solution and thereafter applying it to the fabric.

In response the Examiner would like to point out that the claims are directed to a sheet of material having an admicellar hydrophobic polymer thereon and not the process of making such a sheet. The patentability of a product does not depend on its method of production. If the product is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). The structure implied by the process steps has been considered when assessing the patentability of these product-by-process claims over the prior art. Although the Applicants argue that the manufacturing process steps impart distinctive structural characteristics to the final product, nothing on the record shows that this is the case. Once a product appearing to be substantially identical is found and a 35 U.S.C. 102 /103 rejection is made, the burden shifts to the Applicants to show an unobvious difference.

Hence, the above rejections are maintained.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheeba Ahmed whose telephone number is (571)272-1504. The examiner can normally be reached on Mondays-Thursdays from 7:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571)272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sheeba Ahmed
Art Unit 1773
April 24, 2006